U.S. Shirts

SCENARIO: This past summer you were hired to work at a custom T-shirt shop, U.S. Shirts. One of your responsibilities is to find the total cost of customers’ orders. The shop charges $8 per shirt with a one-time set-up fee of $15.

1. What is the total cost of an order for 10 shirts?
2. What is the total cost of an order for 100 shirts?
3. Explain how you found the total costs.
4. How many T-shirts can a customer buy for $60?
5. How many T-shirts can a customer buy for $250?

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| **Labels** | **Number of shirts ordered** | **Total cost** |
| **Unit** | **Shirts** | **$** |
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1. Explain how you found the number of shirts that can be purchased.
2. Make a table of values for the problem situation.
3. What are the variable quantities in this problem situation? Assign letters to represent these quantities and include each quantity’s units.
4. What are the constant quantities in this problem situation? Include the units that are used to measure these quantities.
5. Which variable quantity depends on the other variable quantity?
6. Which of the variables is the independent variable and which is the dependent variable?
7. On graph paper, create a graph of the data from your table. First, choose your bounds and intervals. Remember to label your graph clearly and add a title to the graph.
8. Use your graph to determine the price of 40 shirts and 27 shirts. Use your graph to determine how many shirts can be purchased for $300 and for $540.
9. Write an algebraic equation for the problem situation.
10. In this lesson, you have represented the problem situation in four different ways: as a sentence, as a table, as a graph, and as an equation. Explain the advantages and disadvantages of each representation.